



# **Nurse-Led Team for Insertion of Central Lines**

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# PART 1

## Objectives

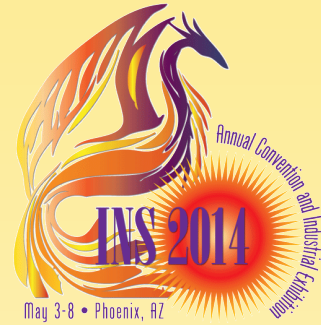


- ☐ Nurse placement of CVCs (IJs)
- ☐ Ultrasound use
- ☐ Bundle implementation
- ☐ Patient Safety
- ☐ Cost effective



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# Reason for change from Physician to Nurse insertions



## ➤ More **timely** placed lines

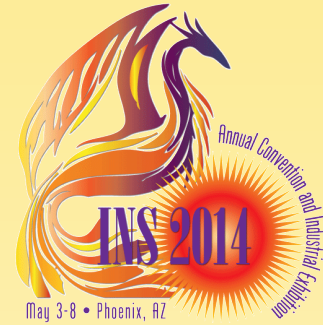
- Dedicated team of skilled nurses
- Less workflow then physicians

## ➤ **Safer** for patients by using portable ultrasound (US) 100% of time

- Research shows approximately only 30% of physicians use US routinely
- Decrease complications, less attempts

Casey & Elliott, 2010  
McGrattan et al., 2008

# Implementation & documentation on Central Line Bundle



Decrease infections

CHG skin prep

Full Barrier Precautions

35% mortality rates are associated with  
central line infections

# Most Appropriate Line for Therapy



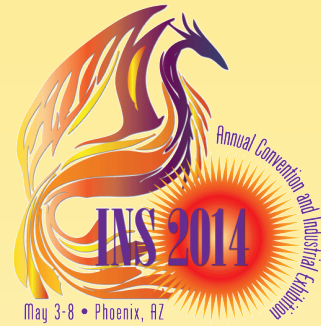
- Assessment
- Best Line for Therapy
- Obtain order
- Obtain consent
- Nurse to place determined line

# Implementation



- PICC nurses skilled in Ultrasound use
- Specialty Certification
  - ✓ INS – CRNI
  - ✓ AVA – VA-BC
  - ✓ ACLS
- Didactic 8 hour course
- Preceptorship

# Evaluations



- Nurse & Physician surveys
  - Are lines placed timely?
  - Is there a decrease in CLABSI?
  - Do patients receive appropriate line?
- Less complications with line insertions
- Money savings by utilizing specialty nurses
- Decreased length of stay?

# Outcomes



- SPECIALTY RNS placing central venous catheters within **2 hours** of order
- Patients venous anatomy PRESERVED by earlier line placement
- DECREASED COMPLICATIONS from use of ultrasound 100% of insertions
- DECREASED LINE INFECTIONS by following evidence based practice, guidelines, and standards of practice



# Part 2

## Objectives



- ☐ Multidisciplinary Team members
- ☐ Competency and Expertise
- ☐ Patient Safety
- ☐ Case Scenarios

# Multidisciplinary Team Member



- Advanced Registered Respiratory Therapist
- Critical care experience
- ACLS
- 3 months of aggressive training with Infusion Nurse
  - Sterile Technique
  - Previous art line experience

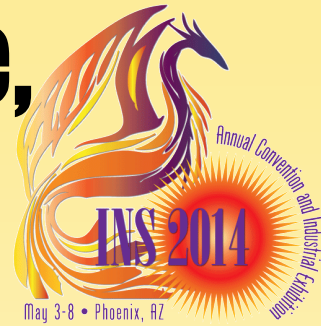
# Differences in Respiratory Therapists



- CRT (diff between LPN and RN)
- Respiratory Therapist -Associate degree
- Registered Respiratory Therapist
  - Pass National Boards Test
- **RRT-Advanced** (facility determined)
  - Specially selected, demonstrated skills, tested and checked off by management
  - Lead responsibilities, able to run the shift
  - Line Team
    - 8 hr didactic PICC -10 PICCs
    - 8 hr didactic CVCs -25 IJs
    - Arterial Lines -5

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# Must have Infusion RN educate, mentor & evaluate



## Reasons:

- Experience
- Certified in Vascular/Infusion Specialty
- Vast knowledge
- Troubleshooting
- Sterile Technique

# Case #1



Case scenario-picc pulled back during the night and redressed by RN

- Action by vascular access multidisciplinary team
- Assessment by Infusion/Vascular RN Team Member
- Recommendations for Treatment

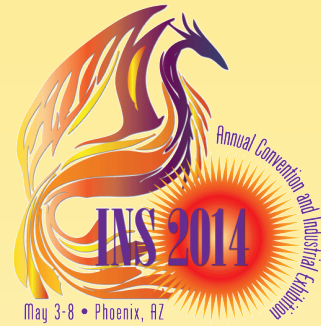
# Case #2



Port-a-cath not giving a blood return

- Action by multidisciplinary team
- Assessment by Infusion/Vascular RN Team Member
- Recommendations

# Case #3

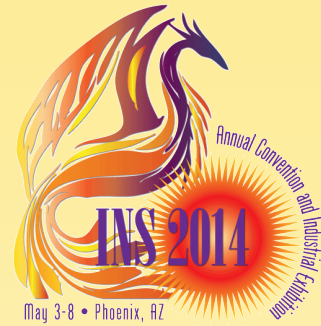


Newly placed port with on and off blood return

- Questions to Team
  - Cathflo or not
  - To refer or not
- Chest x-ray results
- New port
- Educational opportunities

# Case #4

## PICC line difficulty with drawing lab



- Multiple hemolyzed lab results
  - More flushing, better?
  - Cathflo?
- Assessment by Infusion/Vascular RN Team Member
  - Valved catheter
- Recommendations for Treatment



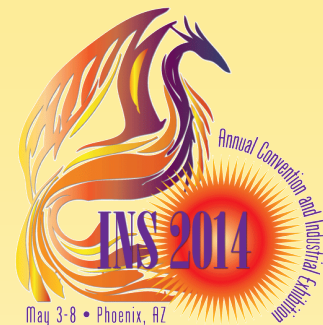
# The Value of the RN



This patient scenario represented a change in practice at our facility. The RN team member recognized the hemolysis issue as a global wide issue and took the necessary steps to assess, implement a plan, and evaluate the changes.

- Assessed
- Cost (lab/RN time, tubes, patient's blood)
- Plan
- Supply need / Education need
- Evaluated

# Necessity of the RN



- RN has *phlebotomy* knowledge and experience
- Assessment piece of the entire picture
- Catheter, connector, vacutainer, or education problem
- RN quickly recognized this is a global issue and planned the necessary steps by developing work group
- RN telephoned other facilities to inquire if others are having troubles with the connector or catheter that they were using.

# Costs



- ✓ BMP \$10.90
- ✓ CBC \$10.01
- ✓ Blood Cultures \$13.30
- ✓ Flush \$ 0.27/syringe (2 after lab draws)
- ✓ RN wages average wasted time ... ***RN Pay Range \$25.47-\$40.69***

Nurse Poll: RN lab draw time to check order, gather supplies, draw sample, flush, label, send to lab

- ✓ 15 minutes

- ✓ Cathflo patient cost of med **\$277.20**, our cost to instill **\$428.20**

# Patient Outcomes



- Measureable in cost and patient outcomes
- Certified RNs add a tremendous value of expertise, education, and competency to the team!
- Multidisciplinary team members benefit from infusion knowledge.
- Better patient outcomes from *certified* Nurses!



# **NURSING is a vital piece of the puzzle**



Nursing over site of patient care

Infusion Nurses have 8 core competencies

Nurses are the key to success and safe patient outcomes

# QUESTIONS?



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